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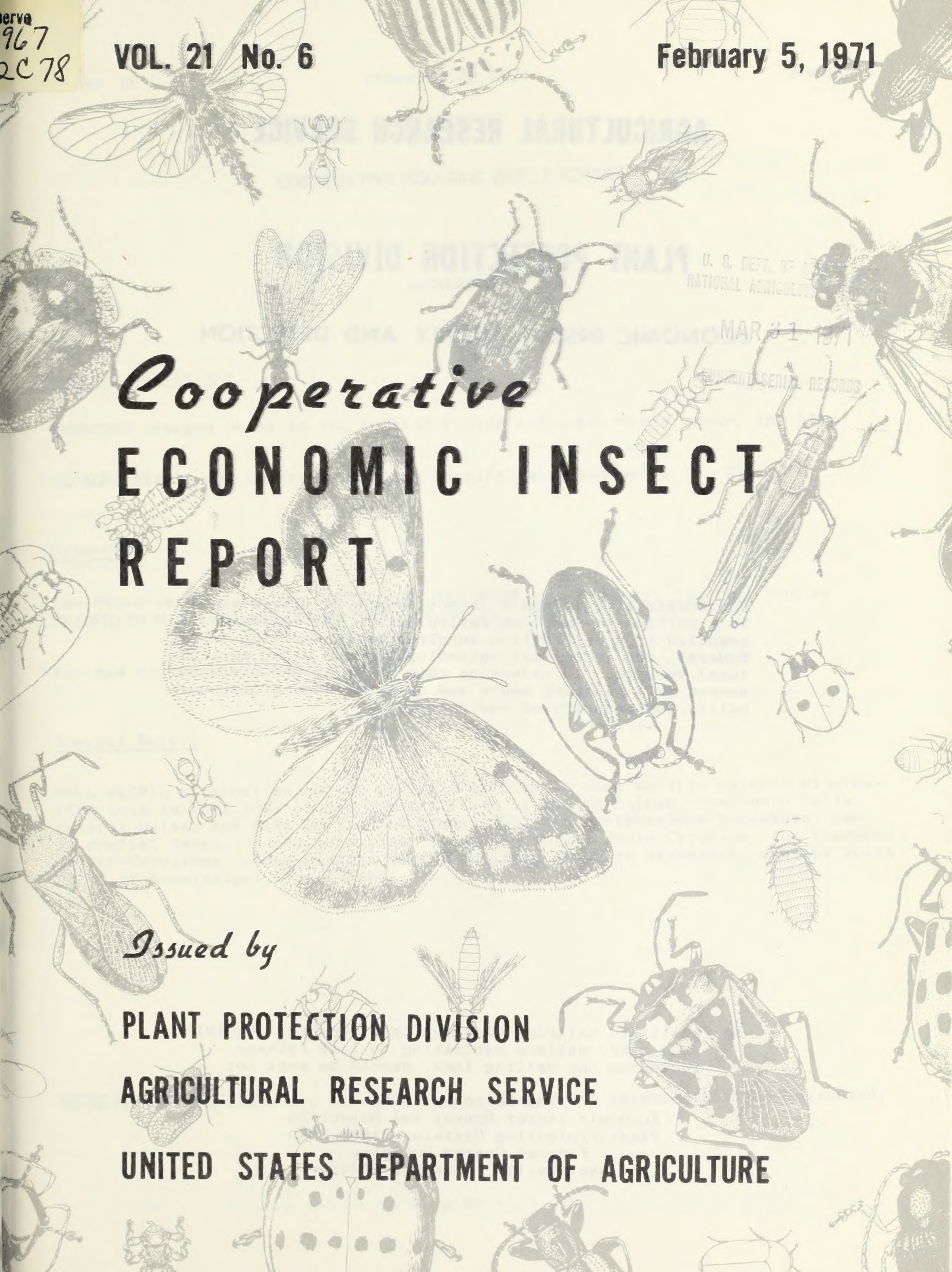

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CURRENT SERIAL RECORDS

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PROTECTION DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PROTECTION DIVISION

ECONOMIC INSECT SURVEY AND DETECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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The Editors, CEIR
Economic Insect Survey and Detection
Plant Protection Division, ARS, USDA
Federal Center Building
Hyattsville, Maryland 20782

Volume 21 February 5, 1971 Number 6

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG damaged wheat in the Rolling Plains and north Texas areas. (p. 57).

ALFALFA WEEVIL egg counts increasing on alfalfa in Kentucky. (p. 57).

Detection

New State records include PITCH PINE TIP MOTH from Missouri (p. 58), and an ERIOPHYID MITE and IVY APHID from Oregon (p. 58).

For new county records see page 60.

Special Report

BOLL WEEVIL hibernation survey for fall 1970 shows more weevils entered hibernation than in fall 1969 in the Coastal Plain of the Carolinas, the South Delta, Central Delta, and Hill Section of Mississippi, in northeastern Louisiana, and in central Texas. Counts were lower in south-central South Carolina, the Piedmont of the Carolinas, north-central North Carolina, southern Tennessee, and the North Delta of Mississippi. (pp. 61-64).

Reports in this issue are for week ending January 29 unless otherwise indicated.

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NATIONAL WEATHER SERVICE'S 30-DAY OUTLOOK

FEBRUARY 1971

The National Weather Service's 30-day outlook for February is for temperatures to average below normal over the eastern half of the Nation with the most extreme cold over the northern Mississippi Valley. Warmer than normal conditions are expected to prevail from the eastern slopes of the Rockies to the Pacific coast, with near normal averages in the Great Plains and central valley of California. Precipitation is expected to exceed normal over the Southeast, the northwest Pacific coast, and portions of the northern Plains. Subnormal totals are indicated for the Great Basin, the central Rockies, and most of the southern and central Plains. Near normal amounts are in prospect in unspecified areas.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the National Weather Service. You can subscribe through the Superintendent of Documents, Washington, D.C. 20250. Price $5.00 a year.

WEATHER OF THE WEEK ENDING FEBRUARY 1

HIGHLIGHTS: The West was mostly fair and mild. The East was cold, windy and stormy.

PRECIPITATION: Rain, heavy at times, fell along the northern Pacific coast. Quillayette, Washington, received 6.6 inches in the 24-hour period ending at noon Tuesday. Heavy snow fell in the nearby hills and Cascades. Snow depth at Stampede Pass, Washington, reached 215 inches Monday evening and it was still snowing. Paradise Ranger Station, Washington, on the south side of Mt. Rainier received 88 inches of snow in 3 days Friday to Sunday, bringing their snow depth to 202 inches. A massive winter storm centered over the northern Great Plains on Monday moved to Ontario, Canada, during the week spreading miserable weather from the northern Great Plains to New England. Winds gusted 50-70 m.p.h. at times, being especially strong on Tuesday. Strong winds accompanied by heavy snow and poor visibility made automobile travel impossible at some places and extremely hazardous at many others. Early in the week, thunderstorms accurred along the Atlantic coast and dense fog covered parts of the Deep South. As the weekend approached rains slackened in the Northwest. More snow fell in the Northeast. Boonville, New York, with 10 inches of new snow, measured a record-breaking 60 inches on the ground Saturday morning. Strong winds gusting to 60+ m.p.h. drifted snow badly and closed roads in the area. Weekend showers brought additional rain to the Southeast. A large area from southern Oregon and California to Mississippi received no precipitation or only widely scattered light sprinkles during the week. Rains along the Washington coast ranged from 2 to almost 9 inches. Totals elsewhere ranged mostly from 0.10 to about 1 inch. Weather of the week continued on page 60

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

GREENBUG (*Schizaphis graminum*) - ARIZONA - Surveys negative in grain on west side of Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). NEW MEXICO - Light on barley at Roswell, Chaves County. (Mathews). TEXAS - Combination of low moisture and greenbugs damaged wheat in northern areas and in Rolling Plains. Much damage to wheat in Foard and Knox Counties. Counts of 500 per linear foot common on wheat in Knox County. Some damage in Cottle and Hardeman Counties. Some controls applied. Populations remain heavy in northern counties in Denton County area. (Collier et al.). Ranged 5-280 per linear foot in small grain in 16 central and northern counties January 26-29. Braconid wasps noted in some counties. (Green). OKLAHOMA - Ranged 15-100 per linear foot on small grains in Roger Mills County. (Okla. Coop. Sur.). KANSAS - Light in wheat surveyed in south-central and southwest crop districts. Heaviest count 4.3 per row foot in Barber County field. Average per row foot as follows for 3 fields in each county: Meade, none; Clark, 0-1.3; Comanche, 0-0.3; Harper, none; and Sumner, none. (Iselin). ARKANSAS - Survey negative on wheat in northwest area. (Boyer).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Light to heavy on alfalfa in Roswell and Hagerman areas, Chaves County. Some counts as high as 100 per square foot. (Mathews).

SMALL GRAINS

APPLE GRAIN APHID (*Rhopalosiphum fitchii*) - KANSAS - Counts zero to trace on wheat in south-central and southwest crop districts. (Iselin).

ENGLISH GRAIN APHID (*Macrosiphum avenae*) - MISSISSIPPI - Averaged 5 per 100 sweeps of winter wheat at State College, Oktibbeha County. (Sartor). ARKANSAS - Increased, ranged 50-75 per 100 sweeps, on wheat in northwest area. (Boyer).

FORAGE LEGUMES

ALFALFA WEEVIL (*Hypera postica*) - KENTUCKY - Eggs averaged 213 per square foot of alfalfa in 3 Fayette County fields. (Barnett).

PEA APHID (*Acyrthosiphon pisum*) - NEW MEXICO - Light to heavy, up to 100 per square foot, on alfalfa in Roswell and Hagerman areas, Chaves County. (Mathews).

GENERAL VEGETABLES

GREEN PEACH APHID (*Myzus persicae*) - ARIZONA - Required treatment on lettuce at Yuma, Yuma County. Heavy on cabbage and cauliflower in home garden at Casa Grande, Pinal County. (Ariz. Coop. Sur.).

BEET ARMYWORM (*Spodoptera exigua*) - ARIZONA - First instars of this species and *Trichoplusia ni* (cabbage looper) in lettuce at Yuma, Yuma County. (Ariz. Coop. Sur.).

A SYMPHYLAN (*Scutigerella causeyae*) - MISSOURI - Collected at Briar, Ripley County, by L.R. Hanning April 7, 1970. This is a new county record. (Munson).

CITRUS

TEXAS CITRUS MITE (*Eutetranychus banksi*) - ARIZONA - Survey January 19 negative for live mites in Yuma County groves treated and under inspection. (Ariz. Coop. Sur.).

CITRUS RED MITE (*Panonychus citri*) - ARIZONA - Counts of 81.60 per leaf in one lemon grove at Yuma, Yuma County, January 19. (Ariz. Coop. Sur.).

AN ARMORED SCALE (*Unaspis citri*) - FLORIDA - Adults moderate on 1,100 sweet orange (*Citrus sinensis*) nursery plants at Montverde, Lake County, January 21. (DeWolf).

ORNAMENTALS

BAGWORM (Thyridopteryx ephemeraeformis) - KENTUCKY - Bags averaged 5 per Juniperus virginiana tree in one of 3 Fayette County nurseries. In 2 additional nurseries, counts less than 1 per 10 trees. (Barnett).

PEACHTREE BORER (Sanninoidea exitiosa) - TENNESSEE - Infestation light but tree damage heavy on flowering almond in Warren County. (Gordon).

IVY APHID (Aphis hederae) - OREGON - Nymphs and adults spotty, mostly adults found on young shoots of English ivy at Salem, Marion County, during October 1970. Collected by R.L. Westcott. Determined by L.M. Russell. This is a new State record. (Westcott).

AN ERIOPHYID MITE (Eriophyes canestrinii) - OREGON - Heavy under leaf scales of boxwood at Corvallis, Benton County, January 18, 1971. This species forms small flower gall but generally not considered injurious to host. Collected and determined by G.W. Krantz; confirmed by H.H. Keifer. This is a new State record. Generally widespread in California. (Krantz).

FOREST AND SHADE TREES

PITCH PINE TIP MOTH (Rhyacionia rigidana) - MISSOURI - Collected at Licking, Texas County, August 21, 1970, on loblolly and shortleaf pines. This is a new State record. The following collections are new county records: Elsberry, Lincoln County, and Willow Springs, Howell County, September 30, 1970, on shortleaf pine; Eugene, Miller County, January 5, and Gladden, Dent County, January 7, 1971, on shortleaf pine. Collected and determined by W.H. Kearby. (Munson).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - No cases reported in U.S. January 24-30. Total of 82 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico as follows: Sonora 69, Chihuahua 1, Nuevo Leon 5, Tamaulipas 7. Total of 3 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screwworm flies released: Texas 2,428,000; Mexico 98,630,000. (Anim. Health Div.).

CATTLE GRUBS (Hypoderma spp.) - OKLAHOMA - H. lineatum (common cattle grub) ranged 0-14 (average 6) per head on cattle in Payne County. Decrease light in same herd past 21 days, probably indicates grubs dropping to ground to pupate. Moderate in Mayes County and light in Choctaw County. (Okla. Coop. Sur.). KENTUCKY - Hypoderma spp. ranged 0-9 (averaged 3.1) per animal on backs of Holstein cattle of various ages in Fayette County. (Barnett).

BLACK BLOW FLY (Phormia regina) - OKLAHOMA - Adults of this and other species, but mainly P. regina, heavy and caused annoyance around poultry farms in Le Flore and McCurtain Counties. (Okla. Coop. Sur.).

SHORTNOSED CATTLE LOUSE (Haematopinus eurysternus) - OKLAHOMA - Lice, mainly this species, still moderate on Mayes County cattle. Averaged 0.5 per part on Payne County cattle. (Okla. Coop. Sur.).

CATTLE TICKS (Boophilus spp.) - TEXAS - Specimens collected from quarantine zone (extends from Brownsville to Devils River above Del Rio) during December. (Anim. Health Div.).

SHEEP SCAB MITE (Psoroptes ovis) - IOWA - Specimens taken from cattle in feedlot in Woodbury County during December. (Anim. Health Div.).

BROWN RECLUSE SPIDER (Loxosceles reclusa) - ALABAMA - Two adults collected from home near Allsboro in Colbert County. (Burns).

BENEFICIAL INSECTS

A BRACONID (*Lysiphlebus testaceipes*) - OREGON - Parasitism heavy in specimens of *Aphis hederae* (ivy aphid) collected at Salem, Marion County, in October 1970. About 50 percent of aphids examined in laboratory infested. Determined by P.M. Marsh. (Westcott).

HONEY BEE (*Apis mellifera*) - ALABAMA - Honey production 11 percent less than in 1969. Decrease in yield per colony and number of colonies reduced production to 2,210,000 pounds compared with 2,492,000 pounds last year. Yield per colony averaged 26 pounds, 2 pounds less than in 1969. Number of colonies declined to 85,000 in 1970, 4 percent less than previous year. (Strong, Markham).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

PINK BOLLWORM (*Pectinophora gossypiella*) - FLORIDA - Recovered 3 larvae in 50 open bolls of wild cotton at Key Largo Key, Monroe County, January 12. Determined by V.H. Owens. (Creamer).

HAWAII INSECT REPORT

General Vegetables - SWEETPOTATO VINE BORER (*Omphisa anastomosalis*) larvae and/or pupae 2 per foot of stem in small planting of sweetpotato (*Ipomoea batatas*) at Ewa, Oahu. (Au). All stages of BEAN FLY (*Melanagromyza phaseoli*) light in backyard plantings of yardlongbeans (seedlings and mature plants) at Ewa. Light in community garden of same crop at Puunene and 1 percent of petioles infested in 1,000 square feet of snap beans at Waikapu, Maui. No chemical control applied. At Waimanalo, Oahu, all of foot-tall seedlings in 0.25 acre of snap beans infested; all plants severely damaged. (Ah Sam, Funasaki, Kawamura). Up to 3 nymphs and/or adults of TARO LEAFHOPPER (*Tarophagus proserpina*) per leaf infested 25 percent of plants in 2 acres of taro (*Colocasia esculenta*) at Waihee, Maui. Trace (less than 10 percent of plants infested) in 2 acres of taro at Waipahu, Oahu; as many as 5 nymphs and/or adults per plant. Nymphs and adults of a PREDACEOUS CASPID BUG (*Cyrtorhinus fulvus*) moderate amid leafhopper infestations at both areas. (Miyahira, Funasaki, Kawamura). SWEETPOTATO HORNWORM (*Agrius cingulatus*) larvae averaged 1 per 2 square yards in one acre of sweetpotato at Waimanalo, Oahu. (Kawamura).

Fruits and Nuts - BLACK PARLATORIA SCALE (*Parlatoria zizyphus*) light to moderate on 6 *Citrus* spp. at Waipahu, Oahu; heavy, up to 300+ per square inch, on few older leaves. (Kawamura).

Ornamentals - GREEN SCALE (*Coccus viridis*) moderate to heavy (average 15 per square inch) on several backyard *Plumeria obtusa* trees at Waipahu, Oahu. Nymphs and adults of lady beetles (*Cryptolaemus montrouzieri* and *Azya luteipes*) abundant on heavily infested leaves. Heavy also in 0.5 acre of commercial planting of *Plumeria* spp. at Waianae. (Yamamoto, Funasaki, Kawamura).

Man and Animals - CLUSTER FLY (*Pollenia rudis*) moderate to heavy in various situations at Pohakuloa and Waimea, Hawaii; remains light at large and inside buildings at Kahua Ranch. (State Dept. Health).

Beneficial Insects - LANTANA GALL FLY (*Eutreta xanthochaeta*) infested all vervain (*Stachytarpheta* sp.) bushes in random check along Kahekili Highway, Oahu; averaged one gall per foot of pencil-size stem. (Kashiwai, Rose).

Miscellaneous Insects - Adults of a GEOMETRID MOTH (*Semiothisa* sp., probably *santaremaria*) emerged from larvae collected on leaves of *Leucaena glauca* and *Desmanthus virgatus* in pasture at Poipu, Kauai; first record of its host relationship. One adult taken in light trap at Kaneohe, Oahu; previously all specimens collected in leeward areas of this island. (Sugawa, Au).

DETECTION

New State Records - AN ERIOPHYID MITE (Eriophyes canestrinii) OREGON - Benton County (p. 58). IVY APHID (Aphis hederae) OREGON - Marion County (p. 58). PITCH PINE TIP MOTH (Rhyacionia rigidana) MISSOURI - Texas County (p. 58).

New County Records - PITCH PINE TIP MOTH (Rhyacionia rigidana) MISSOURI - Lincoln, Howell, Miller, and Dent (p. 58). A SYMPHYLAN (Scutigerella causeyae) MISSOURI - Ripley (p. 57).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 1/22-28, BL - Armyworm (Pseudaletia unipuncta) 4, beet armyworm (Spodoptera exigua) 1, black cutworm (Agrotis ipsilon) 5, granulate cutworm (Feltia subterranea) 4.

Weather of the week continued from page 56.

TEMPERATURE: Arctic air poured into the north-central States and spread eastward and southward; the mercury at International Falls, Minnesota, plunged to -30° Tuesday morning. By Thursday, subzero weather had been experienced in more than a dozen States from Montana to Maine and as far south as Iowa and Illinois. Subfreezing temperatures occurred in all of the continental States Thursday morning and midday maximums were below zero in parts of Minnesota and the northern portions of New York and New England. Gainesville, Florida, registered 25° Thursday morning. Mild temperatures occurred across the South from California to Florida. Some higher readings were 88° at Cotulla, Texas, on Monday, 85° at Vero Beach, Florida, on Tuesday, and 90° at Thermal, California, and 83° at Phoenix, Arizona, on Wednesday. The weekend brought contrasting temperatures to the Nation. On Saturday morning subzero temperatures occured from eastern Montana to the Great Lakes, and as far south as central Illinois. In the afternoon record-breaking warmth covered southern Texas and parts of Washington and Oregon. In general weekly mean temperatures were above normal over the West and South-Central and below normal from the northern Great Plains to the Atlantic Ocean and southward to Georgia and Florida. The Great Basin and northern and central Rocky Mountains averaged 12° to 24° warmer than normal. The Great Lakes region averaged 12° to 18° colder than normal. (Summary supplied by Environmental Data Service, ESSA.)

Boll Weevil Hibernation Survey - Fall 1970

The fall collections of surface ground (woods) trash samples (two square yards per sample) have been completed in six Southern States by State and Federal agencies to determine the number of boll weevil (Anthonomus grandis) adults that went into hibernation. Three samples were taken at each location in the Carolinas, Mississippi, Louisiana, and Texas. A total of 12 samples was taken in Tennessee. Thirty locations were sampled in each area in North and South Carolina; the number of counties per area from which samples were taken varied from 3 to 6. In North Carolina, Halifax County has replaced Wilson County. In Mississippi, a total of 45 samples was taken from 15 locations in each of 4 areas; each area was composed of 2 counties. Tate County has replaced Monroe County in the Hill Section of Mississippi. Samples were collected at 45 locations in northeastern Louisiana: 20 locations in Madison Parish, 10 in Tensas Parish, and 5 each in East Carroll, West Carroll, and Richland Parishes. This is the third year trash samples have been collected in Richland Parish. In Texas, 75 samples were taken from 25 locations in 4 counties, with either 6 or 7 locations sampled in each county.

The average number of boll weevils entering hibernation in the fall of 1970 was higher than in the fall of 1969 in the Coastal Plain of the Carolinas, the South Delta, Central Delta, and Hill Section of Mississippi, in northeastern Louisiana, and in central Texas. Counts were lower in south-central South Carolina, the Piedmont of the Carolinas, north-central North Carolina, southern Tennessee, and the North Delta of Mississippi. The number of weevils per acre entering hibernation in north-central North Carolina decreased from 3,603 in 1969 to 673 in 1970. The decrease in the North Delta of Mississippi was from 4,698 in 1969 to 756 in 1970.

In Florence County, South Carolina, where fall examinations have been made since 1942 (except for the fall of 1946), the number of weevils per acre (10,114) is 1.7 times the number in 1969 and 1.4 times the 27-year average. This is the first year since 1965 that more than 10,000 weevils per acre have been found during fall examinations in this county.

The survey in Tennessee was conducted in Fayette, Hardeman, McNairy, and Hardin Counties where infestations were heaviest during the 1970 growing season. Live weevils averaged 1,008 per acre in this four-county area. This compares with 1,815 in 1969, 1,213 in 1968, 7,580 in 1967, 7,120 in 1966, and 1,211 in 1965. The figure for 1965 is for McNairy County only.

Live boll weevils averaged 2,902 per acre of ground trash in Mississippi. This State average compares with 3,105 weevils per acre in 1969, 2,768 in 1968, 6,304 in 1967, 2,956 in 1966, and 7,325 in 1965.

In the five-parish area surveyed in northeast Louisiana, live boll weevils averaged 8,458 per acre. Average counts per acre by parish were 7,418 in Madison, 5,563 in Tensas, 4,678 in East Carroll, 9,034 in West Carroll, and 21,619 in Richland. In Madison Parish, where these records have been made for the past 34 years and the period average is 3,730, there have been only two years when the number of weevils per acre entering hibernation has been higher than in 1970. The 7,418 weevils per acre this year compares with 4,518 in 1969. In Tensas Parish, where the 15-year average is 5,490 weevils per acre, there have been four years when the number of weevils has been greater than in 1970. There were 4,596 weevils per acre in 1969. In East Carroll Parish, the 1970 collection was the highest number recovered in four years and compares with 2,091 per acre in 1969. Collections were begun in West Carroll Parish in 1967. The average of 9,034 weevils per acre in 1970 compares with a three-year average of 6,184 weevils per acre. The 1970 average of 21,619 in Richland Parish compares with 1,128 in 1969 and the two-year average of 1,855 weevils per acre. Collections of woods trash in northeast Louisiana were started November 18 and completed November 24. The average minimum temperature during this period was 36°, with a low of 21° recorded November 24. The average maximum temperature was 63°. Only a trace of rainfall was recorded; however, 1.59 inches were recorded November 14 and 15, before the collections were begun.

Boll weevils averaged 3,392 per acre in central Texas in the fall of 1970 compared with 1,647 in 1969, 4,070 in 1968, 4,942 in 1967, 4,877 in 1966, and 4,425 in 1965. Fewer weevils entered hibernation in the fall of 1970 in McLennan and Falls Counties than any year except 1962, 1963, and 1969, all drought years. In Hill County, lower counts than this year were found only in 1963 and 1968. More weevils were found in Falls County in the fall of 1970 than any year except 1959 and 1960. The area average was lower in 1970 than any year except 1962, 1963, and 1969. Very hot, dry weather during 1970 prevented a weevil buildup during the growing season. Heavy rains during September and October, however, prevented early harvest and stalk destruction in many fields and there was a late buildup of weevils to enter hibernation. Collections of woods trash were made in the four-county area from November 5 to November 10. Frost occurred October 30 and November 2, 3, 4, and 5. Most cotton that had not previously been destroyed was killed by the frost. (H.M. Taft, A.R. Hopkins, J.H. Locke, T.R. Pfrimmer, T.C. Cleveland et al., and C.B. Cowan).

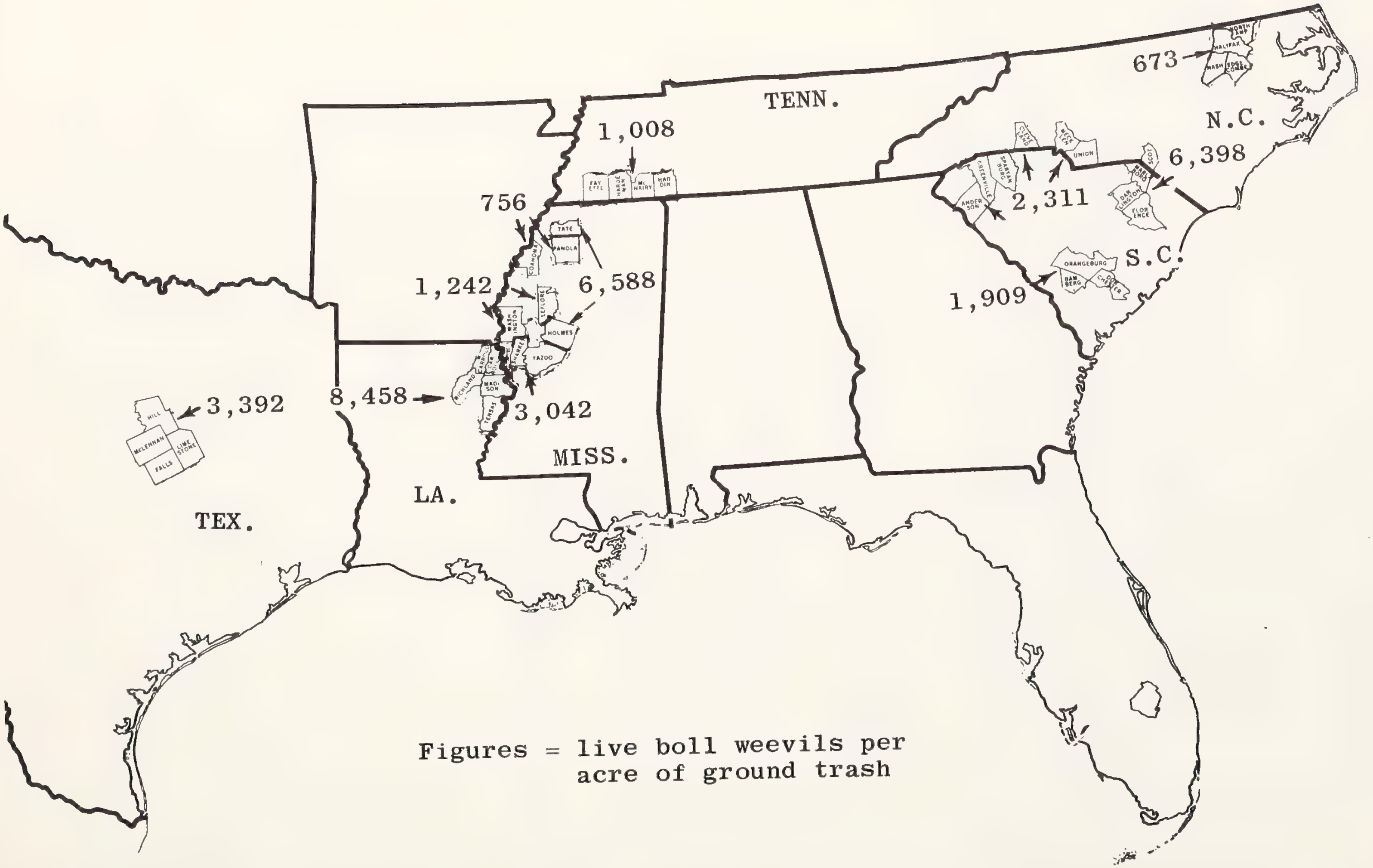
See table and map on following pages.

BOLL WEEVIL HIBERNATION SURVEY - FALL 1970

Area (State and County)	Number of Weevils Per Acre	
	1969	1970
NORTH AND SOUTH CAROLINA		
South Central South Carolina (Orangeburg, Bamberg, and Dorchester Counties).	4,705	1,909
Coastal Plain of South and North Carolina (Florence, Darlington, and Marlboro Counties, S.C.; Scotland County, N.C.).	4,625	6,398
Piedmont of South and North Carolina (Andersonville, Greenville, and Spartanburg Counties, S.C.; Mecklenburg, Cleveland, and Union Counties, N.C.).	3,146	2,311
North Central North Carolina (Nash, Halifax, Northampton, and Edgecombe Counties).	3,603	673
TENNESSEE		
Southern Tier of Counties (Fayette, Hardeman, McNairy, and Hardin Counties).	1,815	1,008
MISSISSIPPI		
South Delta (Sharkey and Yazoo Counties (area 1)).	2,160	3,042
Central Delta (Washington and Leflore Counties (area 2)).	540	1,242
North Delta (Coahoma and Panola Counties (area 3)).	4,698	756
Hill Section (Holmes and Tate Counties (area 4)).	5,022	6,588
LOUISIANA		
Northeastern (Madison, Tensas, East Carroll, West Carroll, and Richland Parishes).	3,557	8,458
TEXAS		
Central (Falls, Hill, Limestone, and McLennan Counties).	1,647	3,392

See map on following page.

BOLL WEEVIL HIBERNATION SURVEYS - FALL 1970



Figures = live boll weevils per acre of ground trash

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